Paper 17

Can teamwork skills be assessed fairly in higher education?

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Abstract

Teamwork is widely acknowledged as an essential skill for students in higher education to prepare them to the real-life team working environments (Lynch, Heinze 2007). But, it is not easy to assess team working skills (Cooper and Heinze 2007). Moreover, some authors such as Hyland and Johnson (1998) argue that transferable, generic, core, key skills cannot exist outside of a context, but should be replaced by curriculum experiences which are not structured enough to be assessed adequately. Teamwork is also full of pitfalls for students, making each individuals' experience unique.

This paper reports on findings from three years of action research on a team project based learning environment at a Higher Education Institution. It is followed by a discussion at a workshop aiming to address some of the common issues of teamwork and assessment. Particular attention is given to "fair" assessment of teamwork and strategies to make the assessment a "fair" process, drawing on experience of one of the schemes run in the Salford Business School.

The findings highlight that issues of passengers, selection of team leaders and team composition have a direct link in relation to fair assessment. Moreover, it is argued that to make the assessment process "fair" assessment is to be undertaken continuously throughout the team working process. Assessment has to ideally focus on the project deliverables as well as the process the team members engage in and finally that peer assessment, which allows all team members to reflect on their own and the performance of their peers, can be an effective means of assessment.

Introduction

Graduate employability is a term than encompasses several elements, such as knowledge and skills and personal self-esteem. Generic skills, also known as transferable skills, have varying listings, but most commonly used lists include: working in a team, creativity, planning and communication (Dacre Pool and Sewell 2007). All of these are typically expected to be developed to a greater or lesser extent in team project working. Dacre Pool and Sewell (2007) also use the term "emotional intelligence", which links together an awareness of others with personal reflection as a factor of employability and also suggest that work experience or projects for clients will play a part in developing employability skills. However, Hyland and Johnson (1998) argue that transferable, generic, core, or key skills cannot exist outside of a context, so should be replaced by talk of learning experiences within the curriculum. Any suggestion of a general skill should be closely related to the context with its associated body of knowledge.

The design of a team project as a learning activity gives learners an opportunity to interact with the learning material in a way that embeds it into a typical working scenario, which Quinn called "engaging learning" (Quinn 1997). For example to develop a website the team have to negotiate the requirements with the project client who might not be familiar with the web development process and cannot advise the team on what it is exactly that they require. This means that the team have to use knowledge gained in other modules such as systems analysis and design, and need to clarify the specifications needed. Making a learning experience engaging involves interactivity and embeddedness, qualities noted in different learning preferences, so the range of experiences afforded by a team project makes learning accessible to different types of learners, and provides the practice and reflection elements of an experiential learning cycle, to complete the process. Reflection on the learning and the processes of team working form a part of the PDP reflection, valuable for applying for employment upon graduation.

One commonly acknowledged drawback of teamwork is the possibility of being dragged down by weak students, and the phenomenon of "free-riding" also called social loafing (Piezon and Ferree 2008) or unequal contribution or distribution of tasks (Burdett 2003). Positive and negative emotions may also affect the progress of a project, and emotions are only a symptom of other aspects of team working (Peslak 2005). There have been few studies into the affective or socio-emotional aspects of team working with students, except for Jones and Issroff (2005), who suggest that more longitudinal studies need to be carried out, if an understanding of affective aspects of team working is to be gained. This workshop aimed to identify some of the real issues in student team working that affect the potential to assess the individual students "fairly".

Description of our context

In the context of information systems or computing, team working encompasses various practical skills, such as programming, design, analysis and project management, as well as softer skills such as people management, negotiation, listening and communication. The primary purpose of student team project working is to provide the opportunity to gain experience of team working, and practice the practical skills in a context close to a real world experience (Cooper and Heinze 2007). The Team Project module is compulsory for all students undertaking Business Information Systems, Business Information Technology and E-Commerce Systems degree programmes. Students from different programmes are combined in one team of about 7 to 10 people. Because team members comprise second and final year students, this provides a mix of abilities and encourages inter-team learning. Working in teams may benefit individuals as they learn from each other, pool their resources, make decisions, share ideas or create an artefact in a mutually supportive environment (Jaques 1984:80). In the Salford Business School each team project is unique in the way that that it is set-up, because the projects are provided by external entities, such as charitable organisations or commercial companies, so that the projects are as near "real life" as is possible without taking students to new premises and exposing them to the work environments of different organisations.

Student teams are provided with allocated space in computer labs, meeting rooms and support from the virtual learning environment. These projects form a substantial proportion of their study time, i.e. about 20%. Although each project is unique, all teams have a common set of marking criteria on individual and team basis; the team and individual graded components are given in Table 1. These criteria have been refined through the years and because of the high credit level of assessment weighting associated with team project work towards the final degree classification it was decided that the distribution of 70% individual mark and 30% team mark were adopted. The procedure for assessing adopted by the module tutors is to each mark one of the components, and to then meet together to verify the component grades and agree the resulting team and individual marks, by considering all of the assessment components as a whole.

Team mark (30%)	**Individual mark (70%)**
•Tutor observations •Monthly meetings with the team •Team report •Client feedback form (end of semester)	•Tutor observations •Peer assessment •Ad-hoc meetings with individual where needed •Individual report

Table 1 – Assessed components of the team projects in Salford Business School

Last year assessment and feedback were two of the main areas for criticism of the Salford Business School (SBS) from the National Student Survey, and the team project module has been said to lack consistency in marking. This workshop was arranged in an effort to try to find out the process of team work assessment currently used across other faculties and universities, and to see whether best practice could be derived from the attendees at this workshop, through sharing their practice.

Workshop process

The aims of the workshop were to:

- share what is commonly meant by "teamwork" skills;
- share common issues and challenges in assessment facing educators who utilise team work;
- propose possible multiple action to resolve the potential challenges.

The workshop took the form of a short presentation giving the context for the workshop and two breakout sessions to elicit ideas from attendees. The first breakout session was to give attendees the opportunity to discuss and identify common issues and challenges of team working facing educators, by listing the constituent parts of teamwork skills and identifying which of these is it possible to assess. The second was to find out how assessment of team projects is approached in the individual attendees' discipline areas, and whether there are issues that make this assessment "unfair" in some ways. All comments from attendees were noted and collated on flip charts for further discussion within the whole group of workshop attendees, and are given in full in the boxes in the next section of this paper.

The workshop ended with a general discussion focusing on the issues the groups identified, in order to provide some answers to the questions:

- Is assessment of team projects a fair process?
- Can we assess teamwork skills?
- How can learners also be encouraged to reflect on their experience?

Workshop findings

From the first breakout session a number of common issues and challenges were listed as a result of the discussion from two separate groups of attendees. As is often the case with workshop discussions, the questions given to discuss were not fully adhered to, as issues sparked comments which sent the discussion off at a tangent from the original questions set for discussion. As a result the list coming from the discussion merged the questions and developed into ways to manage the issues and challenges as well. In presenting the findings from the workshop in this section, the order of the questions posed has been disregarded, so that more meaningful analysis of the findings can be made.

Common issues and challenges were listed as:

- Communication of assessment expectations
- Too much assessment
- Reviewing the team
- OK to fail
- One person doing all work
- More objective if company input
- Fragmentation of groups
- Freeloaders
- Preparation of students for this type of assessment
- Students do not understand assess criteria
- Assessors skills – facilitators skills
- Personalities – each student an individual

The main difficulty students in a team are reported to encounter is an imbalance of the workload, with a consequent opportunity for freeloaders who contribute little to the team outputs and fragmentation of the team. It is notable that some of the traditional issues of team working, such as leadership (Aranda, Aranda 1998), trust (Henttonen and Blomqvist 2005) and communication (He, Butler 2007) did not feature in this list. The issues of team working may vary from team to team, so assessing the team outputs becomes difficult when individuals within a team have experienced certain issues, which may have contributed considerably to their learning of team working skills, but not to their learning of the practical skills of the task, as demonstrated by the outputs from the project, which can be assessed in a transparent manner. It must not be forgotten that students are individuals

Workshop attendees identified ways to help the students with their team working, including better preparation for team working, communicating to students the expectations of tutors for the assessment, the need for assessor and facilitator skills, to enable tutors to review project work and provide formative feedback. There was a feeling that perhaps tutors include too much assessment of team projects, but that in terms of individual learning within team projects, tutors should emphasise that it is alright if a team fails to achieve the set goals, provided the team skill learning is evident. Finally, the input of outside organisations can contribute significantly to the objectivity of the assessment.

The next part of the workshop discussion responses were collated according to current practice in assessing team projects. The following list shows that student reflection (5 attendees mentioned this in relation to assessment) and negotiation (4 mentions) through peer assessment were used by attendees. Real world assessment, based on an appraisal, together with observation, measuring interaction and individual contribution, shown by a portfolio, and product based assessment were commonly used. These methods raised the issue of whether assessment should be centred on the product or the process of team working, or indeed whether both should be assessed.

Current practice in assessing teams were:
- Portfolio – Identify individual contribution.
- Continuous assessment – process and product.
- Real world - appraisal style
- Individual projects
- Measure process
- Measure learning
- Product based assess
- Same project
- Whole class
- Individual reflection
- Real world assessment
- Contribution
- Negotiation (4)
- Observation
- Interaction
- Peer assessment
- Reflection (5)

Returning to the constituent parts of team working that attendees identified, there were listed as follows, with the number in brackets representing the number of attendees agreeing that this part could be assessed:

- Leadership, time management (5),
- Communication, to resolve a problem (4), negotiating, setting objectives (5), analysis (5), cooperative learning,
- Respect (3)
- Goal setting (7)
- Self-assessment
- Communication (5)
- Integration of theory and practice (7)

Clearly from this list there are many constituent parts to team working that could be assessed, and communicating a clear rubric for assessment to the students is essential. Some of these assessment components are relevant to the process of team working, and some to the product of the team effort. The learning objectives of team projects need to make assessment clear, and these must be communicated to the students. Perhaps there should be learning agreements for each part of the team project. From the student perspective they need to aware of the importance of working together, and that sometimes a lot of work is brought together, and some should be discarded if it is not relevant to the project outcomes.

Conclusions

In rounding up the workshop session a number of conclusions were proposed, which attempt to summarise the contributions of the attendees at the workshop.

Assessment should ideally focus on the process the team members engage in, as well as the project deliverables. Although some of these may be difficult to assess, clear learning outcomes and assessment criteria that are communicated to the students should make this possible. A procedure for continuous assessment that is undertaken throughout the team working process should make the assessment transparent, and more likely to be perceived as "fair".

Students will experience various difficulties as they carry out their team projects, such as freeloading. Team composition and team leader selection can play an important part in the perception of "fair" assessment, so tutors should take care when allocating students to teams. Students should be encouraged to reflect on their team processes, both on their own performance, and that of their fellow team members, and peer assessment can be an effective means of assessment.

The findings and conclusions from this workshop did not answer all of the questions originally posed, indeed the outcomes of the workshop demonstrate that assessing student team projects is extremely complicated, and requires careful planning from the outset. More research into the administration of team projects is suggested, so it is hoped that this paper may serve as a stating point for further work into this topic.

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